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Virginia Wildlife

Dedicated to the Conservation of Virginia's Wildlife and Related Natural Resources and to the Betterment of Outdoor Recreation in Virginia

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Observations, conclusions and opinions expressed in *Virginia Wildlife* are those of the authors and do not necessarily reflect those of the members or staff of the Commission of Game and Inland Fisheries.

COVER: Little blue herons, two adult, one immature, over a coastal marsh. Our artist: Rockne Knuth, Sarona, Wisconsin.

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The Big Lie About Hunting

IS this the last generation of American hunters that will enjoy the privilege of going afield with shotgun or rifle to take a legitimate harvest of the annual wildlife crop?

That harsh question is asked by *Outdoor Life* magazine in its June issue, in an article on the growth and methods of the antihunting movement. The magazine concludes that there is good reason to fear that the answer may be yes.

The article—written by Ben East, retired senior field editor of the magazine and one of the leading conservation writers in the country—carries the blunt title: "The Big Lie." It is the first of a three-part series dealing in detail with the mounting wave of antihunting hysteria that has swept the country in the last two years.

Mr. East asks two key questions:

Will a hard core of fanatics, resorting to misrepresentation and falsehood, succeed in convincing the majority of Americans, who know little or nothing about hunting, that the sport is cruel and destructive and that the hunter is the arch enemy of all wildlife? And will it be television that deals the final blow?

He concludes that unless hunters defend themselves more effectively than they have done up to now, the answer to both questions is likely to be yes. He also quotes, as witnesses to the danger, some of the country's leading conservation organizations and experts.

Is there really a campaign on to end hunting? East points to the now-infamous TV show, "Say Goodbye," aired on the NBC network in January 1971. Purporting to be a documentary dealing with endangered wildlife, the show included, among other footage, a sequence of a polar-bear "hunt" on the ice off Alaska.

Actually, the female polar bear in the film was not shot by a hunter or with a rifle, but rather by a biologist with a drug-dart gun. And after she had been weighed, measured, and tagged she recovered and walked off unharmed with her two cubs. Those facts, however, were carefully kept from the television audience.

A storm of protest from sportsmen's organizations and outdoor writers followed, but no amends were made, and hunting suffered a bad black eye.

Another film, showing an alleged buffalo hunt that was actually a herd-thinning operation conducted in a corral, had the same effect last September. Again the anger of hunters was aroused. But the damage had already been done.

Mr. East does not make unfounded accusations, but presents facts which suggest a conscious effort to "make hunting look sickening" to TV audiences and thus turn the American public against all hunting.

Unless hunters act together to make their objections known whenever the mass media resort to the technique of The Big Lie about hunting, the day may well be near when its hysterical foes will succeed in putting the sport to an end.

The concluding article in the series is scheduled for the August issue of *Outdoor Life*.

Unsafe Gun Handling

I have been an avid reader of *Virginia Wildlife* for many years and believe it is one of the finer publications devoted to the conservation of Virginia's natural resources. However, I have just finished the fine article "Responding to the Challenge," on pages 9-11 of the March issue, and would like to point out the photograph contained therein which shows Mr. Rue holding his weapon in a very unsafe manner. I'm sure Mr. Rue knows better, but I'm also sure that many youngsters enjoy looking at the fine pictures in *Virginia Wildlife* and learning by them. Let's don't let these youngsters learn the wrong thing, especially when gun safety is concerned.

Michael T. Jones
Martinsville

Object to Goshen Plan

THOSE that know Goshen Pass, Virginia, and nature lovers everywhere, please lend us your ears. A plan for "preservation and providing public access" to Goshen Pass has recently been approved by the Virginia Commission of Outdoor Recreation. The project will cost $3.17 million—its aim, to *supposedly* relieve the congested situation that now exists, and to safeguard its natural beauty. The proposed plan involves the construction of two waysides, at which will be located restrooms, trails, parking areas, and an information center.

Strangely enough, this plan will accomplish just the opposite of what it set out to do. Goshen Pass will become commercialized. Tourists will pour in—the quiet peacefulness and real beauty of the Pass will be destroyed. The privacy of the people living or owning summer cabins in this area has obviously not been considered, nor the wildlife, that will be driven from their homes. The money could be put to much better use. And the plan certainly won't make any improvement as far as congestion is concerned—there will be more people than ever before. And the litter will speak for itself.

Here is a resolution that reveals the strong opposition the students at Lexington High School feel:

> We, the members of the Student Cooperative Association of Lexington High School, feel that the proposed development of Goshen Pass is a small, confined area which has a maximum limit of recreational potential and use. We feel this limit will be attained in the near future.
>
> Furthermore, we feel that any future development of the Pass will result in an influx of people which will destroy its natural beauty and ecological balance.
>
> Therefore, we oppose all developments *except:* (1) Acquisition of land on either side of the Pass and the "meadow grounds"; (2) increased rest room facilities. We feel any other developments than these will be detrimental to the preservation of the Pass.

Charles Wisecarver
SCA President
Lexington

Petri Heil!

By JACK RANDOLPH
Spring Grove

A HINT of frost hung in the air. The shots that echoed in the hills gave me the feeling of fall and quail and squirrels. But it wasn't fall. It was late summer and the shots I heard were fired by old men patrolling the German vineyards with muzzle loaders, firing blanks to scare the birds from the ripening grapes.

I was standing on the banks of the Kocher River, a small stream that ran through the low hills outside of Heilbronn, Germany. The river, hardly a good creek back home, looked "trouty" with deep, slow pools and shining riffles. Yet, according to my fishing permit, the stream held no trout. My permit said hecht, which is German for pike.

The water looked so good I couldn't resist the temptation to try a few trout lures anyhow. Previously I had found some fine German browns in water where they weren't supposed to be. I rigged up an ultra-light spinning outfit, armed with a tiny spoon.

The spoon cast like a bullet to the head of a fine looking pool. As I picked up the slack and started to move the lure towards me something belted it in a very trout-like manner. For an instant the fish used the current to his advantage, but too soon it began to give ground. To my surprise a familiar flash of green and orange caught my eye as I beached a fine, one pound yellow perch.

I carried the fish to a patch of green grass where I could look it over closely to see if it was any different from our perch back home. I could see no difference, but my examination was cut short by a cheery "Petri Heil."

"Hello," I replied to the German angler, as he climbed off his bicycle. "I just caught a nice perch," I volunteered, holding the fish up so he could see it.

"Oh, you have a fine barsch," he said in good English as he admired my catch. "How is that name you called it?"

"Perch," I repeated, "yellow perch. We have many of these in America."

"In Germany we call this fish barsch. They are very fine to eat," he offered.

"What was that you said when you rode up?" I asked.

"When I rode up?"

"Yes, something about Petri Heil."

"Ah, Petri Heil," he repeated smiling. "This is something German fishers always say to each other. It is a greeting, meaning fisherman's luck."

"I imagine it has something to do with Saint Peter," I prodded, hoping to learn more.

"Jah, that is correct," he continued. "This greeting is some hundreds of years old. When our Lord was on earth He met on the shores of Lake Genezareth, the fisher Simon, later called Petrus. Simon complained bitterly that he had fished all that night and had caught nothing. Jesus then told him to try again. Reluctantly he did so and he came back with a load of fish. This was Saint Peter's Luck, or as we say, 'Petri Heil'."

The traditional fisherman's greeting is but one of the things that makes fishing in Germany a truly rewarding experience. The German system of managing their sport fishery is a radical departure from ours. At first glance their system of private ownership of fishing rights under strict control of the government is over restrictive. Yet, anyone who has had the opportunity

A pair of German pike, caught by the author near Munich.

to enjoy the excellent fishing maintained under this system can't help but wonder. Perhaps this look into the past is also a glimpse of the future of fishing in any land where lots of people want to co-exist with lots of fish.

Actually, the German system isn't as restrictive as it appears at first glance. Recently the Germans have passed laws requiring prospective anglers to attend a short course and pass a test before being eligible for a license. The license itself is inexpensive, but since waters are privately managed the angler must also purchase daily permits in order to fish.

Most German laws governing fishing are designed to prevent exploitation of waters by rights holders. The law requires that all streams receive periodic stocking. Owners of the fishing rights on trout waters, for example, are required to stock a certain number of trout fingerlings every year. The number of permits an owner

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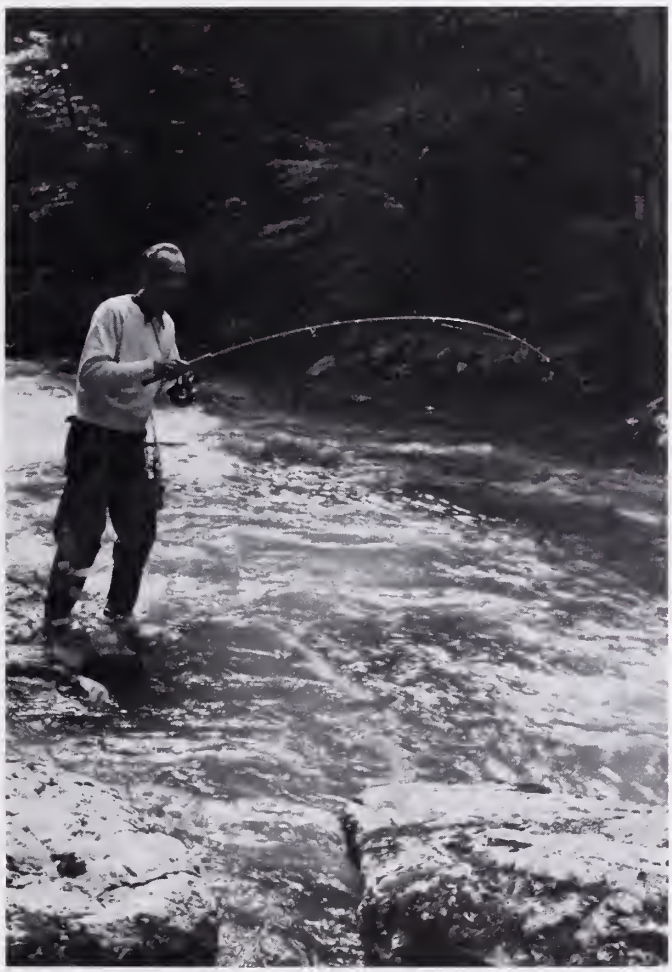
can issue a day or during an entire season is also governed by law. As a rule one angler per kilometer of stream is the limit. The minimum size of fish and daily creel limits are also governed by law, although the stream owner is given plenty of latitude within certain limits.

I'll never forget the first trout I landed on a German stream. It was the foggiest morning I can remember, so foggy that I actually couldn't see the stream before me. I had never fished it before, so you can appreciate the feeling of futility I had when I cast my fly upon the unseen water.

Instantly something grabbed it, and I nearly fell in as a great fish tried to rip my tiny fly rod from my hand.



U.S. Army photo

Trout fishing on the Loisach River, near Garmisch.

"German brown," I thought as the fish tore line from my reel as he tore downstream.

The bank was lined with willows and I couldn't follow my trout. I had no alternative but to jump into the water. Stepping from the bank I fully expected to sink over my wader tops and I braced for the plunge. I hit the gravel bottom with a teeth rattling jar. The water was scarcely a foot deep.

Finally I caught up with the fish and turned him my way. Although it had jumped repeatedly I never saw it until it slipped over the rim of my net. Imagine my surprise when, instead of a brown, my fish was a great hookjawed rainbow!

It wasn't until later that I learned that rainbows are as common in Germany as browns, a result of a love affair that began nearly a century ago.

The first rainbow trout arrived in Germany from the United States in 1882, about 80 years after the first batch of browns were shipped to the United States. It was love at first sight. The rainbows loved the cold clear German streams, and the Germans loved the 'bows' willingness to take a hook and their acrobatic antics at the end of a line. The hatcherymen were pleased with the ease they could raise rainbows as compared to the more reticent browns. Granted, the stream owners had to become accustomed to the rainbows' spring wanderlust, but they forgave this one fault in view of their many virtues.

Brown trout, of course, enjoy a certain amount of popularity in their native land. I was surprised to find the brown trout of Germany a much darker, more beautiful fish than the hatchery specimens I had taken at home. The German brown is indeed brown, dark brown with vivid scarlet spots. In the clear mountain streams, however, the brown takes on a silver sheen, so bright you must look closely to determine whether your fish is a brown or rainbow.

The brown is no easier to catch in Germany than he is elsewhere. Once, when I was the custodian of the Munich Rod & Gun Club, I purchased several hundred pounds of big browns for our club waters. I supervised the stocking, but when opening day rolled around only a few anglers caught fish. Believe me, the club members had my back to the wall for a while until they began to learn how to catch the canny browns.

German lease holders believe that the larger brown trout are cannibalistic and take a heavy toll of small trout. Because of this they often electro-fish their streams and remove the big browns every year.

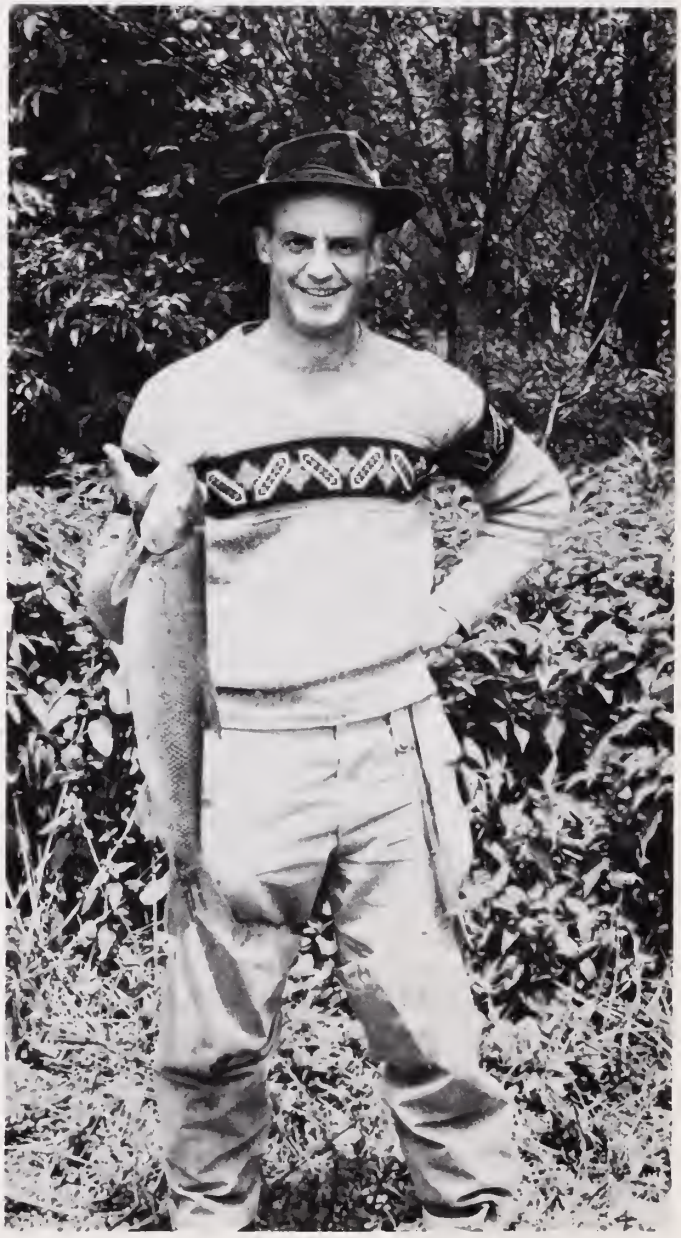
Brook trout were introduced in Germany shortly after the rainbows arrived. Unfortunately, the brookies were a disappointment. Some stream owners believe the brook trout eat the eggs of other trout. On many streams there's no limit on how many an angler can take.

Next to trout, grayling are also popular in Germany. They are a terrific fish for the dry fly man, but they will also hit spinners on occasion. I'll never forget a curious experience involving grayling on the Ammer River, near Oberammergau of Passion Play fame.

Bait is seldom permitted on any trout stream in Germany. Anglers are restricted to artificial lures. On this particular stretch of the Ammer only flies were permitted.

This huchen, taken from the Loisach, weighed almost 12 pounds.
U.S. Army photo

The author holding a nice barbel, related to our suckers, caught from the Loisach River.



Petri Heil! (Continued from page 5)

I had spotted a half dozen tremendous grayling lazing in a wide bend in the stream. The situation called for a long cast because the banks were pasture, and there was no way to get close to the fish. I planned to work out line false casting over the pasture and then, pivot and drop the fly on the water. I had to be careful because there were some bushes to my rear.

Carefully I worked out the line, keeping it high to avoid the threatening brush. I was about to turn and present the fly when the rod was nearly wrapped around my neck. For an instant I thought I had caught a bush but the reel screamed in horror, and I was nearly flipped over backwards.

Imagine my surprise when I turned and saw a frantic roe deer buck with my leader wrapped around one antler, frantically clawing up a small hill. He neither jumped nor sounded. He just went and took my fly along with him.

The huchen or river charr is far and away Germany's biggest trout. The minimum legal length is 28 inches and they sometimes exceed 50 pounds.

In some respects the huchen is the musky of Europe. This fish is a fierce predator. Fish wardens claim they raise havoc with the grayling population. Like muskies in many areas, huchen are best caught during the lean winter months. I hooked one that weighed close to 25 pounds but I never got him to the scales. In fact, I never even landed him, but that's another story.

I have always wondered if there was a place where huchen could be introduced in the United States. They are an interesting game fish providing some exciting winter sport. Often called Danube Salmon, the huchen displays unusual political savvy, inhabiting only the western tributaries of the Danube River.

Rivaling the huchen for size are the elusive German lake trout. These are not lake trout as we know them, but a form of outsized brown trout (fario forma lacus-

tris) that has no red spots. These giants of such lakes as the Walchensee and Koenigsee weigh more than 30 pounds.

Germany also has several species of lake charr. With the possible exception of the Sunapee trout of New Hampshire, we have nothing in the United States quite like them.

These charr live in very deep water and closely resemble brook trout except for the absence of worm-like markings on the back. They are popular with German anglers who catch them on small minnows fished very deep.

Permits to fish trout waters range in price from $1.50 to more than $5.00 per day. For waters holding pike and other species permits are much less expensive.

The German pike is the same fish we call the northern pike here. They are found in many lakes and in the slower backwaters of the larger rivers. Some find their way into trout streams where they are considered a nuisance.

Although there are plenty of big pike caught every year, they could not be considered numerous. In general it is safe to say that pike fishing in Germany is much slower than that found in the northern part of the United States.

The pike-perch or zander is another very interesting European fish found in Germany. Originally they were found from East Germany into Russia. They spread westward to the Danube where they became firmly established. In 1886 they were stocked in the Rhine and from there they spread throughout most of West Germany and France.

The zander looks very much like a huge yellow perch. Specimens exceeding 20 pounds are not rare. Their habits resemble our walleye's, but they are not the same species. They are doing very well in France and may do well in deep lakes where walleyes won't take.

Germany has a long history of experimentation with exotic fish. While they achieved notable success with rainbow trout and zander, they suffered failures too. Attempts to introduce both large- and smallmouth bass failed. Sunfish didn't survive but brown bullheads, stocked in 1885, took hold. The difficulty here is the Germans didn't stock any bullhead fishermen.

The traditional greeting, Petri Heil, is but one of the things that add warmth and depth to the sport of fishing in Germany. An individual fish seems to mean more to the German angler. He spends considerable time admiring his catch before he puts it in his creel. The German angler takes his sport more leisurely, seemingly always to have time to lay his rod aside and contemplate his surroundings.

An angler fishing in Germany for the first time, finds himself exposed to a completely new set of angling ethics. Germans, for example, habitually use wire leaders for pike, not because they are so intent upon landing the fish, but because most water rights owners demand that no fish be lost with hooks in their mouths. Light lines are seldom used for the same reason. Stringers for holding catches are considered cruel. Live baskets are used instead. If creels are employed, ethics require the angler to kill his fish before creeling them.

German fisheries management practices are based upon a combination of ancient tradition and modern science. Some of their regulations are of doubtful value and would probably be considered obsolete in the United States. For example, almost every fish enjoys the protection of a closed season at spawning time, including yellow perch which are stunted and only of nuisance value in many waters. Even eels enjoy the protection of a minimum size limit.

It is difficult to find fault with the German system of maintaining their trout waters. The practice of charging daily fees and ensuring quality fishing has already caught on in the United States. Most dedicated trouters will gladly pay a few dollars to enjoy high quality fishing.

As our population continues to grow at an alarming rate and the demands upon our sport fishery increase, we may well look to the Old World for new ways.

The day may never come when we exchange "Petri Heils," but there's nothing wrong with the good Old Dominion anglers' greeting—"Howdeybitin'?"

A fine brown trout caught by the author from the Red Traun River.

Ghosts of the Sand

By BILL WEEKES
Blacksburg

ON the hot, bleach-white beaches of Virginia or of the Outer Banks of North Carolina dwells a denizen of two worlds. During the day, it furtively surveys the upper sphere through periscoped eyes. At night, it ventures far from its nether sphere searching for sustenance.

Frequently summer beachcombers unexpectedly catch this being out of its burrow. Trapped, it may freeze, or, like a spider on glass, dash away suddenly to be swallowed up by one of its many tunneled sanctuaries.

As you trudge along the sands, the incessant bursting of waves may distract your attention, making you unaware of another zone of life, one from whence dozens of black-paired eyes on stalks are observing the shadows of your sojourn. But at times you will probably glance inland along the blazing, pearl-colored, shell-scattered high tide area. Then you may see them—these pale-bodied, hard-shelled, eight-legged creatures, glued next to their mounds like Buckingham sentries.

Almost as soon as you stop and raise your hand against the glare of summer's sun, the creatures are gone, like apparitions in a haunted house at the first intruding rays of dawn.

It is befitting, and therefore not surprising, that these "apparitions"—these crawling, pale-bond entities with their talent for being nowhere after having been somewhere—have earned the label "ghost crab."

Though the corporeal state of *Ocypcdo albicans* may confound a beachcomber's perception, there is no doubt about the existence of the phantom's calling cards. Colonies of mounds dotting beaches in profusion mark the sites of ghost crab excavations. The mounds are imprinted by claw scratchings making them look like convolutions of a human brain. Paths to and from the holes, resembling chicken trails, or perhaps treads of miniature World War II tanks, are everywhere.

Although the ghost crab forages amid beach wrack for food at night, the creature is, to a certain extent, diurnal. Daybreak is housecleaning time. I noticed this one rosy-fingered dawn in late June while trekking up a section of the 16-mile Cape Hatteras National Seashore on Ocracoke Island, N.C.

I walked with measured step, my eye peeled for a sandy specter. A couple mornings before the tide had invaded the upper reaches of the intertidal area, erasing many crab mounds in its wake. But all looked undisturbed this morning. The tiny *tells* were untrammeled, the colonies intact, their forms casting an array of minute shadows on the gleaming plain.

I suddenly stopped. Before me, 30 feet away, a ghost crab was emerging sidelong from its subterranean shelter, its protuberant black eyes prominent, its right, smaller pincher clutching a bundle of sand against its cephalothorax (head and body), sand unearthed from its underground apartment. The creature laboredly crept a foot or two to one side of its tunnel, stopped and disengaged its burden with a sudden snap, revealing the pearly white of its pincher.

The crab slowly retraced its steps, descended out of sight and emerged ten seconds later with another "armload." I moved closer each time the crab disappeared until finally I got too close for comfort. The crab stuck out its head just long enough to see how large I had

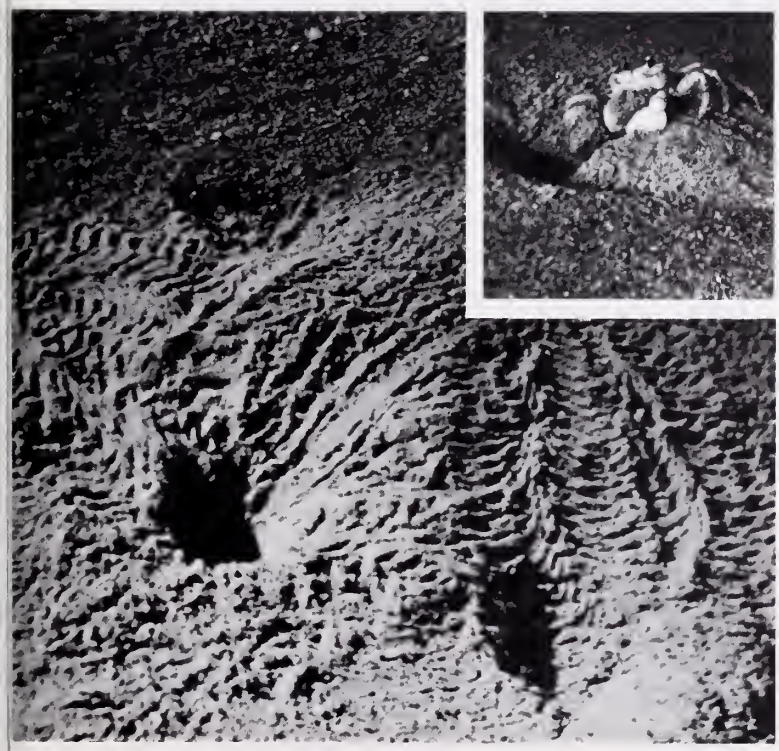
become and then zipped back underground, not to come back out until I had departed.

The ghost crab many times has to defend its burrow. On several occasions I spotted two crabs boxing each other, one chasing the other from the mouth of its grain-walled den. Another time, a crab slowly inched out of its hole while I was standing very still six feet away. As the creature creeped to the lip of its burrow, it stopped. Behind him another crab was emerging. It stopped, waiting for the first crab to get along out. Finally, the crab at the rear got impatient and nudged the first one on out. They stood rigid. I decided to put my hand to my head to see what reaction I might provoke. When I did so, both crabs rushed back down the hole like Alice's rabbit. Obviously they were not male rivals for the same crabby couch.

During my brief stay at Ocracoke, I caught three isolated ghost crabs in the broad of day, each apparently foraging far from its subterranean refuge. The first one I discovered on the sand dunes, inland 150 yards or so from the colonies of mounds. The dunes are stabilized by tufts of marram grass. Sea oats, American beach grass and scattered plantings of sea rocket (also called sea cabbage or sea cactus) also provide a forest for such fauna as mole crickets, earwigs, beach hoppers, locusts and tiger beetles. Such fauna, plus small crustaceans and mole crabs found in intertidal regions and dead birds and other matter deposited on the beach wrack, furnish the ghost crab its daily diet.

It was mid-afternoon when I almost walked into this ghost crab, at the foot of the dunes. It jerked up and jumped back in alarm, stepping hastily but awkwardly up a small sand hill topped by heavy sprouts of marram grass in which it concealed itself.

Paths and scratching around ghost crabs' excavations resemble tracks that might have been made by miniature tanks.



I went to the clump of grass. The crab backtracked out of it, almost falling on its side. It faced me, stalks erect. A white spot on the side of the crab's big black eye turned in blinking fashion. I noticed, unlike some crabs, the ghost crab's legs were bunched inward, arching the cephalothorax at an angle. The crab seemed to be staring at me. Finally, I took two steps to the right and the crab scooted to the left and into more vegetation several yards away. So smoothly and swiftly did it sashay that surely it looked to be pulled along by invisible puppet strings.

A couple mornings later, I was standing along the beach, gazing at the playful antics of a school of porpoises swimming a few hundred yards off shore. Their black bodies glistened as they rolled across the surface of the waves. A couple was walking along the foot of the dunes, a big brown dog tagging behind them. Suddenly the dog stopped and began barking vociferously, jumping up and down at something in the sand. Approaching I saw it was our friend the ghost crab being given a noisy canine lecture. The man stopped long enough to call his dog and the animal reluctantly left the crab. I fastened my eye to the spot where the dog had been and headed for it. At first I couldn't see the crab. But some seconds later I turned around and there it was ten feet away. I must have passed it by a few feet and never noticed it. Strangely, this crab did not try to escape. Perhaps fear or excitement had frozen its instinct to flee.

I walked toward the crab and it eased backward. There was no flying retreat to the upper reaches of the dune as there had been with the first crab. I approached it again, but it did not budge. Instead, it raised its creamy pinchers in defense, like a boxer. I played my foot against its cephalothorax and it responded by pinching my shoe. I waved my shoe over it and the crab rared back as far as it could, trying to watch the shoe and almost falling on its back. As it was getting ready to rain (which it did frequently in June), I decided to leave the creature to itself and departed for the campground where my family and I stayed.

On our final morning, we went blue crabbing. On our way across the beach, I came upon another phantom. Either it was trying to dig a hole or trying to get into one too small for it. It jumped out of the depression when we approached and tried hurriedly to crawl away. My small boy and girl caught up with it, however, and this time I picked up the crab for the kids to get a closer look.

On close inspection one notices two things about the ghost crab—its fine, blond hairs growing on each of its legs, ostensibly for protection against the abrasive-

 (Continued from p. 9)

ness of the sand and for use as outer sensory mechanisms; and its eye stalks which were now flat, or horizontal. They are attached so they turn up and down, from the outside in, like windshield wipers on old model cars. I didn't measure the crab, but texts will tell you the leg span is ten inches and the average size of the pale gray carapace is 1½ x 2 inches.

I wanted to keep the crab to take back to the campground, so I took off my shoes and put the creature in one of them. It quickly squeezed itself into the toe, its new manufactured burrow. I then swaddled the shoe in a beach towel. This should hold him, I thought.

For about an hour we directed our efforts to catching the blue crab. In the summer, they rest motionlessly in shallow water along the beach near the lip of the undertow. If you get too close, they slide off the sands and disappear into deeper water. That afternoon we netted 27 of these crustaceans.

Actually, the ghost crab was once an aquatic creature before evolving to land. Now it is a species that can't swim. Nevertheless, the ghost crab must return to the water periodically to fill its gill chambers, for it must still breathe through gills. The ghost crab also must liberate its young into the sea, where it becomes part of the zooplankton.

Our pail full of blue crabs, we headed back to camp. Black-headed laughing gulls and black-capped terns continued their ceaseless sojourns overhead. We approached the dunes and I recalled one evening at dusk when I had come upon several tiny ghost crabs—each about the size of a quarter—in that area. Their bodies were a perfect match to the bluish sand.

As we came nearer camp beach grass and sea oats predominated. In places the white bloom of the spiny yucca showed itself. Tiny toads hopped about when we disturbed the grass with our footsteps. Out over the grassy flats, beyond the dunes, blackbirds flew in company of their cousins—the red-winged blackbirds. Occasionally a black skimmer passed by, its long orange beak pointing seaward.

At our tent we started to pack for the trip back home. I changed the lens on my camera for the purpose of taking some last close-up shots of the ghost crab. If I were lucky, I'd get one of the kids to hold it. I called them over to the car, and as I delicately unwrapped the towel from my shoe I pondered how I should best try to grab hold of the thing without getting pinched. I peeked into the toe of the shoe. Nothing but blackness. The spindly-legged Houdini had escaped its makeshift prison.

During the drive home I wondered how it could have escaped. Could it have evaporated into the salty air? Had one of the kids messed with the towel while I wasn't looking?

Or had it been an apparition after all?

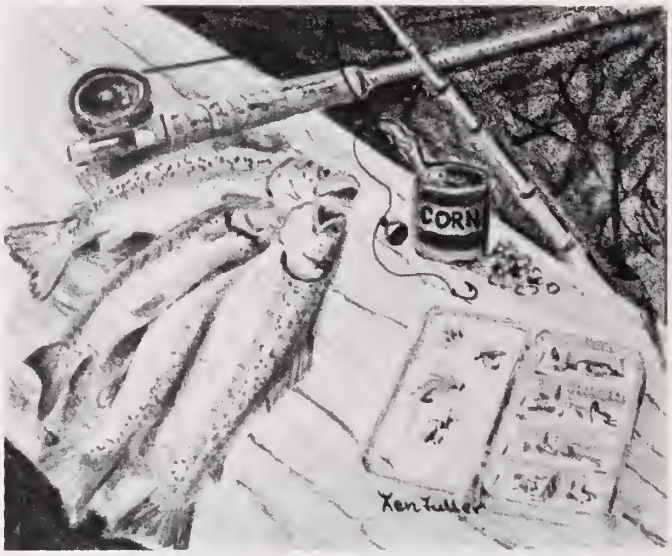
Scientific Fishing and the Smart-Aleck Kid

By BERNIE FULLER
McLean

THE primary thing we're all looking for when we hit the streams in the spring to trout fish is the lure to end all lures. A lure that will just about guarantee that we'll coax a hefty trout to take on every cast. That's the ideal, utopian fishing situation, right?

Wrong!!

I think that we'd soon tire of the cast, hook, fight, land routine and start looking for new ways to match our skill against these wily fish. So, let's forget the ideal, utopian way.



Besides . . .

Fishing pressure has a way of making trout a great deal more selective in the lures they'll take. So we'd eventually be back devising another "ideal" lure. Sort of a never-ending cycle, isn't it? New lure, lots of fish, selective fish, few fish, new lure, etc., etc., etc.

If you are the kind of fly fisherman I am, you've read, studied and memorized every "match the hatch" method which has come down the pike. You've pored over the catalogs and loaded your fly box with all the patterns. Your casting techniques have been practiced over and over—as a matter of fact, you've convinced the kids and the dog that it's unsafe to venture into the backyard on sunny afternoons, for the hook wounds are painful, and, after all, such heavy weight on the end of the line could ruin the action of your cherished Wes Jordan rod. But, alas, even with all these things going in your favor, you are unable to land but one trout during an eight hour day on the most productive stream in the country—and that trout is landed on the hundredth different fly you've tied on.

What happened to "Harry Schmedlap's Sure-Cure Lure Calculator"? It just plain didn't work!

I know the feeling—awful, isn't it? They say that the trout (or any fish) is devoid of intellect, but it's pretty darn demoralizing to be outwitted by one.

A similar thing happened to my brother Ken and me recently. We began the day fishing bucktails and streamers (no luck); switched to wet flies (no luck); tied on dry flies (no luck); and, finally, in desperation, tried terrestrials (again, no luck). Just about that time a smart-aleck kid sauntered up to the stream through the brush, opened a can of niblet corn, put one kernel on a shark hook, whipped it into the water with his surf-casting rod and, within seconds, had hooked and horsed in a 15-inch rainbow.

Photo by the author

Using flies that "match" a natural insect hatch in progress is a well known technique. Examining the contents of a freshly caught bottom feeding trout is another "scientific" way of determining the proper lure.

It was a while before I could settle down enough to even utter a repeatable word. Finally, I turned to Ken, who said, "Look at that! Here we are holding what must be $75 worth of the world's finest flies, and can't even get a glance from a trout. Along comes a kid with a can of corn and he cleans up. Where's the justice?"

To make a long story short, we ended the day with three beauties in the creel and a score released for another day.

What was the initial problem, then? Why didn't we start catching fish sooner?

Plainly, we hadn't taken the advice we always give beginners: Approach a day of trout fishing scientifically.

—Check the water temperature. Trout feed most actively between 50° and 65°.

—Check the water condition. High or low. Clear or cloudy.

—Spend a half hour or so just watching the water surface. If you don't see any characteristic dimples caused by fish feeding on hatching insects, then chances are the trout are feeding below the surface.

By applying these basic tests, we could have eliminated the obviously useless fly types.

Cold water that is cloudy and high with no surface indication of feeding, for example, means that the trout are probably feeding on nymphs and an occasional small bait fish on the bottom. Under these circumstances, you can eliminate, at least initially, dry flies and terrestrials, and concentrate on wet flies, streamers and nymphs. By approaching it this way, you'll save a lot of useless flailing of the water, and, as a bonus, if you're as expert at casting as I am, save a lot of flies that would otherwise get caught in the trees, bushes and clothing during your masterful, delicate presentation.

Now, there is one other "scientific" approach to using the proper lure—and one we used to solve the "Caper of the Uncooperative Trout." That is, bribe the smart-aleck kid to let you examine the stomach contents of the trout he just caught

A thorough examination of the predominant food being eaten will immediately clue you as to the correct lure to concentrate on. In the case in point, the trout had been feeding in gourmet fashion on nymphs and other life on the bottom—apparently the corn was too tempting to pass by. Therefore, once we established the diet, it was a simple matter to entice them with reasonable imitations.

Suppose the kid weren't around, and you had no stomach to analyze? If, after running through your scientific method checklist, you're not successful, the only thing I can recommend is: Keep trying with that which you instinctively feel is the right lure. Chances are you'll eventually get a strike. Then you can use the second "scientific" approach.

To be a successful—hence, happy—trout fisherman, you'll have to be an amateur biologist, entomologist, ichthyologist and hydrologist, but it also helps a great deal if you are a confirmed humorist. Learn to laugh at yourself once in a while. Particularly when you remember that you didn't always have a $300 rod, and that that smart-aleck kid resembles you 30 years ago.

And remember—whichever "scientific" method you use, always have a can of corn handy.

NEW LEGISLATION TO AFFECT SPORTSMEN

By H. L. GILLAM
Information Officer

WITH the beginning of a new license year, Virginia residents and others from surrounding states that choose to participate in fine hunting and fishing which the Old Dominion has to offer will find the rules changed significantly by both the General Assembly and the Game Commission. Non-residents will feel the changes in their pocketbook as a result of new license and permit fees. The non-resident big game license entitling the holder thereof to two deer, one bear and three turkeys will cost $20 this year instead of the former $10 fee. Those who hunt on shooting preserves will have to pay $5 for the special license that was formerly $3. Non-residents hunting in Bath County will be hit for $5 instead of $1 for their big game damage stamp required to hunt deer and bear in the county, the extra money earmarked for trash collection and capture of wild dogs.

Although resident sportsmen generally escaped fee increases, those who use boats powered by motors of less than 10 horsepower in pursuit of their sport will have to register them for the first time by October 1. Boat rental operators will also have to register all powerboats offered for rent, so rental fees may well increase. Persons entitled to fish without a license will save a little, however, since they will no longer be required to purchase a National Forest Stamp to fish on forest streams and lakes.

Other legislative changes in the game and fish laws largely served to clarify or improve existing laws. Hunting seasons interrupted by fire hazard closures will be extended only at the Governor's discretion, rather than automatically. Highland County was authorized to expend damage stamp funds for a radio system and Lunenburg County's prohibition against an early squirrel season was removed.

Some General Assembly bills that did not affect hunters and fishermen directly will affect the status of wildlife in the state. A bill prohibiting the sale of any animal endangered in its native habitat either in the U.S. or elsewhere in the world will help protect Virginia's and the world's wildlife. Probably the most noticeable effect for most Virginians will be a ban on the sale of alligator leather goods and furs from spotted cats. The wetlands bill extends some measure of protection to the state's 300,000 plus acres of wetlands through control of development in these areas. The James River within Richmond city limits is now an "Historic River" which will, to some degree, help preserve its scenic character and may some day help to facilitate fisherman access.

The Game Commission itself made several revolutionary changes in hunting and fishing regulations this year. The first to be felt was doing away with creel limits on all panfish including crappies, sunfishes of all types, rock bass or redeyes, and white bass (except on white bass in Lake Gaston). Also affecting fishermen in Leesville, Smith Mountain, Claytor and other inland lakes except Kerr and Gaston will be a 20 inch minimum size limit on stripers and a daily creel limit of 4 fish.

This fall small game and turkey hunters will soon learn that season dates are uniform both east and west of the Blue Ridge, with the exception of early squirrel seasons. The November 13 opening for small game will cut a week off of the western season and give eastern hunters a week's head start over last year's season. All small game seasons except quail and grouse will end January 31, with quail and grouse season ending February 15.

Bear season will open November 13, and the deer season will open November 20. Archery season will begin October 16 this year, since the 15th falls on Sunday, and will end November 15.

Deer limits remain unchanged from last year. Other seasons will also follow the same schedule as was the case last season.

Several legislative measures that were carried over until the 1973 General Assembly session could, if passed, profoundly affect sportsmen. Senate Bill 150 would require that the Game Commission consult with the King and Queen County Board of Supervisors before making seasons which would affect that county. This would set what the Commission considers a dangerous precedent inviting all counties to ask similar considerations, complicating the season making process and compromising the interests of sportsmen generally throughout the state. House Bill 470 would allow bowhunting on Sundays during the archery season, which proved to be a controversial subject. House Bill 1142 would prohibit the hunting of bears with dogs before the opening of deer season. Unable to resolve this sensitive issue during public hearings on seasons, the Game Commission has appointed a special study committee to hold public hearings around the state to determine the feelings of the state's sportsmen on this issue.

Senate Bill 440 would make it lawful to use shotguns capable of holding 5 shells for hunting, although Federal law specifically prohibits using such weapons on migratory birds. Senate Bill 537 would raise the fee for resident trout licenses from the present $1 to $2, and Senate Bill 218 would provide free hunting and fishing licenses for disabled War Veterans, a category that proved difficult to define during Senate committee hearings on the bill.

CONSERVATIONGRAM

Commission Activities and Late Wildlife News . . . At A Glance

SPRING PHEASANT RELEASES COMPLETED. The Commission of Game and Inland Fisheries has just completed the release of over 1000 hybrid pheasants around the state, reports Game Farm Manager Dennis Hart. "This is a follow-up to over 2000 birds that were released last fall," Hart said. Most of the birds stocked were hens.

The Northern Neck and the Shenandoah Valley received extra heavy allocations. "It appears that the physical barriers of mountains and water help prevent dispersal of the birds and increase chances of establishment," Hart said.

Some 45 pheasants were trapped by state trapper Gerald Blank from the established population in Page County and transferred to the game farm where they will be used as breeding stock. "With good luck we can hatch enough birds to develop an acclimatized strain of breeding stock and begin release of these birds next season," Hart speculated.

PHILPOTT STOCKED WITH CHINOOK SALMON. About 9 thousand Chinook salmon between 2 and 3 inches long have been stocked by the Game Commission in Philpott Reservoir. The salmon were obtained from the state of Washington in exchange for striped bass from the Game Commission's Brookneal hatchery. They were hatched in the Marion hatchery in midwinter and hatchery personnel report excellent survival. The young salmon were released in Smith River, Runnet Bag, Nicklas Creek and Char Creek, all tributaries of Philpott Reservoir. Coho salmon were stocked in the reservoir nearly three years ago and a number were subsequently caught, the largest documented weighing 8 pounds 12 ounces. The Chinook (also known as the king salmon) is a much larger fish, maturing in four years in contrast to the two-year life span of the coho, and reaching weights of 40 pounds and more. Although not stocked in such large numbers as the coho, the Chinook have done well in the Great Lakes. An additional 4 to 5 thousand are being held in the hatchery to be reared to larger size for release this fall, also in Philpott.

STRIPERS SUCCEED IN SUFFOLK LAKE. A total of 15 striped bass taken in two gill net samples from Lake Prince near Suffolk constituted living proof that these fish can be artificially established in smaller freshwater impoundments. The stripers were stocked at 3 to 4 inch size in 1969 and had grown to between $3\frac{1}{2}$ and $4\frac{1}{2}$ pounds and about 22 inches in length. This is better growth than stripers show in the Chesapeake Bay. The stomachs of some fish that died during handling were examined, and the main food seemed to be gizzard shad, apparently an important factor in the success of the stocking effort. Samples are taken with two-inch mesh gill nets, which allow smaller fish to pass through.

Small stripers have been stocked by the Commission for the past three years in Lake Prince, owned by the Norfolk Water Department, in the Portsmouth Water Department's Lake Meade, and in Newport News Water Department's Harwood Mill Pond, all of which have excessive numbers of gizzard shad. Fishermen have reported catching stripers from the other two lakes, but our sampling has not yielded any positive proof to date. Lake Prince at 900 acres is the largest of the three, and Harwood Mill is the smallest with some 240 acres of water. Additional young stripers will be added to these lakes later this summer when they reach sufficient size.

Some of the Game Commission's lakes, especially two larger ones of 400 and 800 acres respectively, now in the planning stages, may be suitable for striped bass in addition to the standard complement of freshwater game fish.

2770 GOBBLERS SETS NEW SPRING RECORD. A tally of 2770 gobblers bagged during the 1972 spring gobbler season makes it a new record, exceeding last year's total by over 500. Wythe County again led the state with 116 gobblers bagged there, not quite up to the 135 taken there last season. Augusta County reported 96 spring gobblers while Dinwiddie and Bath tallied 81 each. Fauquier County was also among the leaders with 77 birds, followed closely by Rockingham with 76, Amelia with 71, and Nelson with 70.

Weatherwise, the gobbler hunters had the odds in their favor this year although a few cold and wet days curtailed gobbling activity. Next spring, all Virginia counties except Lee will be open for the state's first 4 week season which will begin April 14 and extend through May 12.

Virginia's fisheries—how can we train scientists to manage these complex systems?

By ROBERT T. LACKEY
FRANKLIN B. TITLOW

TEACHING FISHER
NEW ROLE FO

NINETEEN seventy-two has arrived—the computer age continues. Today computers are involved with almost all aspects of our lives. Banks use computers to keep customers' accounts in order. Industry uses computers to make financing and salary operations easier. Just how far can computers go? Fortunately, anyone who believes that computers will eventually take over the world has been watching too many science fiction movies.

A computer is an extraordinary tool which can perform simple calculations with amazing speed. Calculations which would take a man days to complete can be handled by a computer in a matter of seconds. In addition, computers extend man's memory by electronically storing great volumes of information. However, all this information must be fed into a computer. Storing inaccurate information in a computer completely destroys its value as a tool and slave for man. The whole computer world, then, relies on man's capacity to gather information.

Now, let me introduce that famous fisherman, Fred Flycaster. Imagine that the number of largemouth bass caught by Fred at the lake last Sunday afternoon indirectly had something to do with computers. Completely ridiculous! Right? However, such a statement may not be so ridiculous ten years from now due to a new method of teaching fisheries management. Teaching "games" form the basis of this method. Games that teach? Sounds a little strange, doesn't it? A teaching game is simply a model of a fishery in an aquatic environment, such as a lake or reservoir. A student, in playing the game, actually *manages* the fishery. The game responds to the student's managerial decisions exactly as the real fishery would. Results of playing the game are determined by a computer.

Developing a model of a fishery requires many months of intense work. All available information on the fishery to be modeled is gathered by researchers. This information must then be carefully studied to determine the interactions taking place between the various parts of the fishery. To illustrate, consider the development of a model of the walleye fishery in Claytor Lake, Pulaski County. Suppose that after studying the available information, researchers decide that three of the most important interacting parts in this fishery are alewives, walleye, and fishermen. They might find that, annually, 90% of the alewives are eaten by walleyes and 35% of the walleye are caught by fishermen. Thus, the interactions between these three parts of the fishery have been determined. This is, of course, a very simplified example. Most of the interactions taking place in a fishery are very complex and much time and work is needed to understand them.

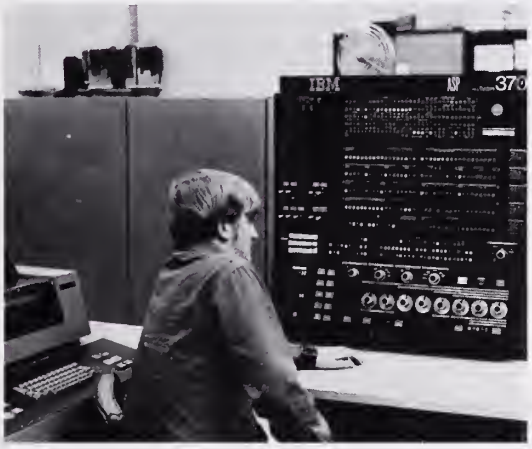
Mr. Lackey, Assistant Professor, and Mr. Titlow, Research Assistant, are with the Fisheries Science Section, Division of Forestry and Wildlife Sciences, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061.

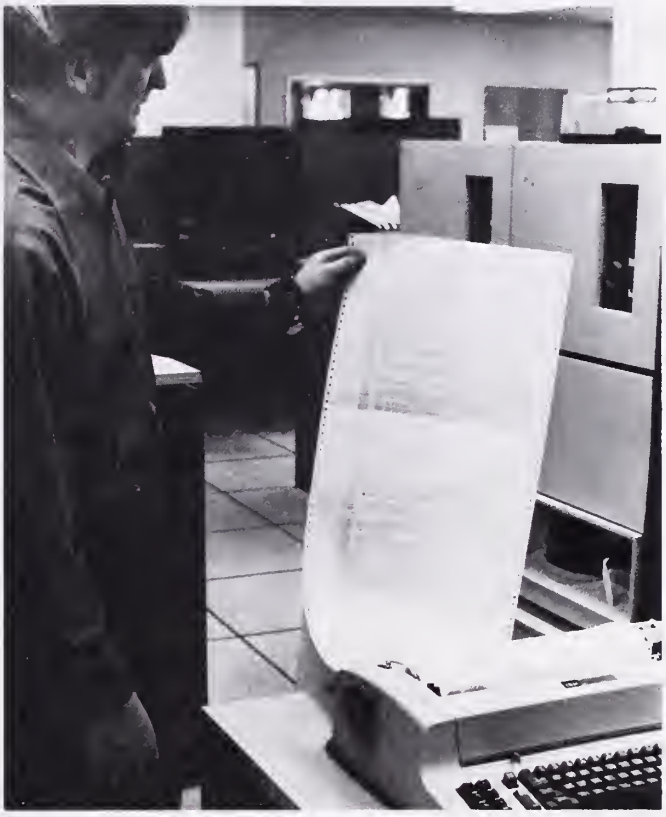
Management decisions are entered on computer cards.

After all the necessary interactions have been determined, this information is put into mathematical form which can then be used in model development. Such development involves many calculations, requiring the use of a computer. If the information which the researchers accumulated accurately reflects the interactions taking place, a realistic model will be produced. This model can then be used as a *teaching game*. Any student who plays the game will be provided with realistic results based on actual past happenings.

How does one play such a game? This question can be answered best by an example. Again consider the hypothetical game dealing with the walleye fishery in Claytor Lake. Fisheries science student Max Manager will serve as player. Max begins play by studying the instructions which include a description of the fishery. These instructions tell him that his goal will be to maximize the walleye catch on an annual basis. In

ES MANAGEMENT: COMPUTERS





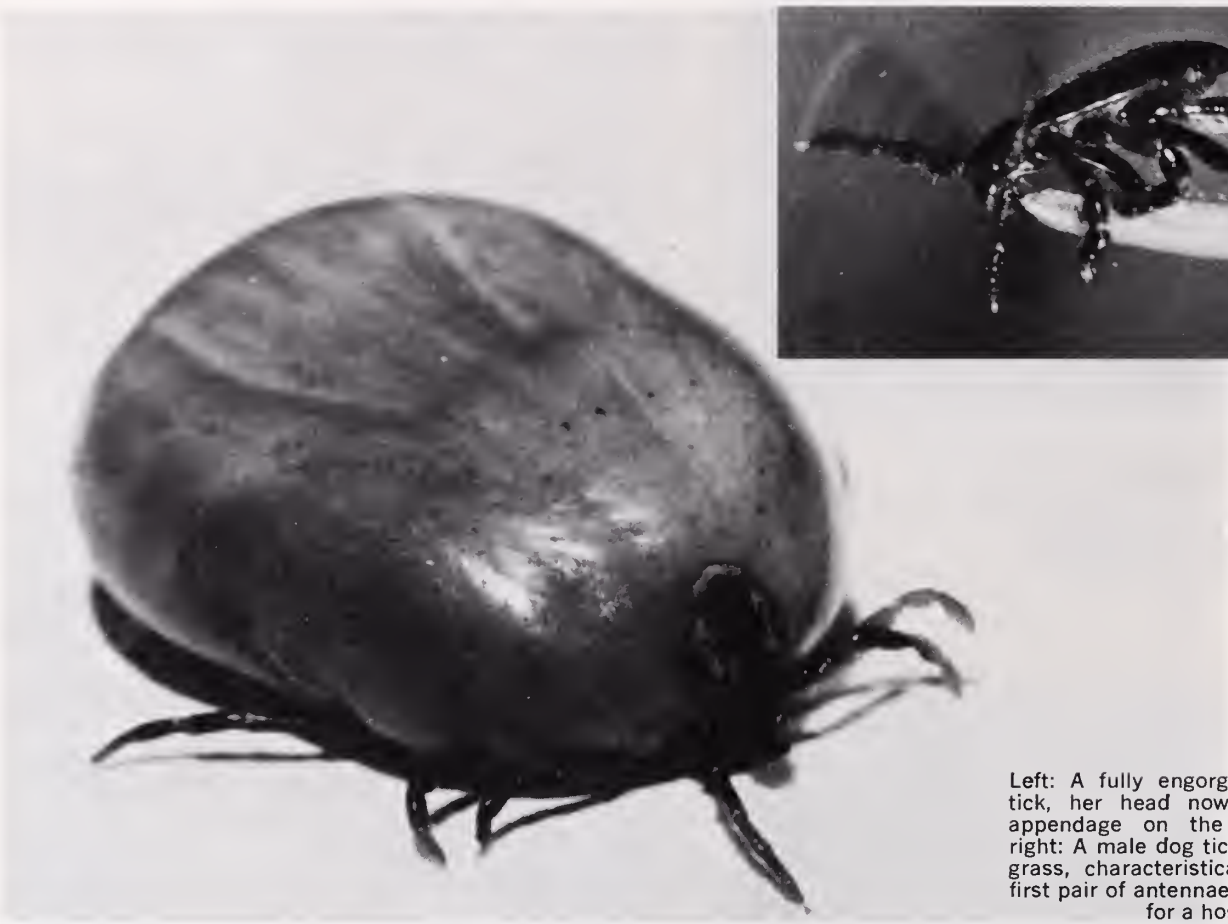
Left to right: The game (program) is fed into the computer, and management decision cards added. Computer calculates the effect of student's management plan for the fishery in seconds, and prints out results—what would have happened to the fishery if the student's decisions really had been carried out.

managing the fishery, he will have to control the water level fluctuation in the lake. After having carefully studied the situation, he might first decide to decrease the water level 5 feet during April and increase it 5 feet in October. Suppose the fluctuation decided upon was bad for the fishery (remember that all results are based on actual occurrences in the past), Max would receive a comment such as this: *This year's poor catch of walleye has the fishermen very upset. How's your pitching arm?* If Max's decisions led to an increase in the number of walleye, his results might include this statement: *The fishermen are satisfied with the recent walleye catch, but improvements can still be made.*

By evaluating the results from each play in terms of past results, Max can determine where he has made mistakes, change his managerial decisions accordingly, and play the game again. After each such play, his understanding of the fishery should increase. As a result of this understanding, his decision making with each successive play should bring him closer and closer to achieving the goal—maximum catch for the fishermen.

The projected increase in use of America's recreational fisheries is astounding. The growing need for intensive management of our fisheries is apparent to anyone who has fished lately. Reservoirs, in particular, need to be efficiently managed. Many capable men, well versed in the techniques of effective fisheries management, are needed to meet this increase in demand. This ability is based largely on actual managerial experience which has not previously been available in the classroom. While actual managerial experience in the field is irreplaceable in terms of quality, there are limitations to the use of field work in the university training of fisheries personnel. The time and money involved make managerial work in the field impractical for the preliminary training of fisheries managers. After all, fisheries are too important to trust to a student.

Through the use of computer teaching games, decision-making experience can be gained within a few days. Errors in decision making occur in the classroom with no waste of natural resources. Several teaching "games" are being used at VPI & SU and form an important part of the education of our new fisheries managers.



Left: A fully engorged female dog tick, her head now only a small appendage on the front. Above, right: A male dog tick on a blade of grass, characteristically waving his first pair of antennae as he searches for a host.

TICKS

By JAMES A. SULLIVAN
Division of Forestry and Wildlife Sciences
Virginia Polytechnic Institute and State University
Blacksburg

WITH the April showers in Virginia, come the ticks of May. Few of Virginia's woodland "uglies" bring as much disgust from us as the tick, whether it be for its crawling on and biting us, or because of its crawling on, imbedding, and bloating on our dogs.

These parasites are easily recognized by their flat, blackish-brown, seed-like bodies and eight curved legs. They have no antennae, have a fused head and thorax, and a leathery, unsegmented body. Their conspicuously jointed legs are shared with insects, but ticks, along with spiders, scorpions, and mites, are in a different class, the Arachnida.

Ticks are both economically and medically important because of their roles as vectors of disease. They carry the organisms responsible for Texas fever in cattle, Rocky Mountain spotted fever, and tularemia (rabbit fever). Heavy infestations may also cause serious anemia in both domestic and wild animals.

They are quite hardy creatures. They can exist for amazingly long periods of time without food, living in water, in vegetation, or on the ground. When they do feed, they are all parasitic on vertebrates: reptiles, birds, mammals, or a specific combination, depending upon the species of tick. Because of its endurance of natural conditions, because of its resistance to chemical control, and because of the fact that, once imbedded, it so resists removal, the tick is an annoying parasite, both of man, and of man's domestic animals.

We recognize two forms of tick—one which is small, dark, and flattened, and the other, which is large, tan, and coffee-bean shaped. One might assume, and be at least partially correct, that the smaller is an unfed, and the larger a fed, tick. In actuality, however, only the female, which is equipped with folds in her skin, can expand to the bloated condition upon feeding on an animal's blood. Though the female increases her weight as much as 200 fold in a matter of days, the male feeds little or none at all, always retaining his small size.

Ticks may live months, even years, without feeding. Beheaded adults are reported to have lived four years, even though their capacity to eat was obviously lost with their heads. Nevertheless, feeding is a prerequisite for the successful completion of the various phases of the life cycle.

This cycle consists of four stages of development:

the egg, the larva, the nymph, and the adult. Each transition (except hatching) results from the creature moulting its exoskeleton. Each transition is also dependent upon the tick finding and feeding once upon a suitable host. For example, both the larva and the nymph of the American dog tick *(Dermocentor variabilis)*, common in this area, feed on small mammals such as meadow mice, pine mice, cottontail rabbits, squirrels, or muskrats. The adult, though, parasitizes larger mammals such as dogs, and man. The third and final meal after reaching adulthood, resulting in a bloated female, ensures that her egg laying will follow. The life cycle is complete.

Partially because much of its time is spent in crevices, moulting from larva to nymph, or from nymph to adult, and partially due to the fact that it may wait for up to two years before a suitable host is found, only a small part of the tick's life may be spent on its hosts. Only when the right host comes along will the tick have the opportunity to eat.

Hosts betray themselves to ticks because of two characteristics: scent and warmth. The tick climbs up a blade of grass, or out onto the leaves and branches of shrubs, and holds on with his three hind pairs of legs, waving the first pair, antennae-like, in the air. With this pair, equipped with smell receptors, the tick "sniffs" the surroundings for the smell of butyric acid, the odor characteristic of rancid butter, and produced in small quantities by animals. Moisture and vibrations attract their attention, but in the end, it's the combination of butyric acid and body heat that finally entices the tick to drop or climb on, imbed, and feed. This simple combination of attractions explains why a tick may accidentally be fooled into dropping onto a warm rock, recently vacated by an animal, and attempt to imbed its head into the rock, killing itself in the process.

Of medical importance to man, ticks carry the rickettsia responsible for Rocky Mountain spotted fever. Though thought by some to be restricted to the northern Rocky Mountain states, Virginia certainly has its share of the disease. Not only is it carried by a western tick, it is also transmitted in this area by the American dog tick. Infection results in profuse blotching of the skin, and though formerly often fatal within seven to ten days, new vaccines and antibiotics now control its effects.

Because it is not necessary for the carrier tick to specifically parasitize man for the completion of its life cycle, the disease does not reach epidemic proportions. Yet, since the rickettsia may be transmitted from one generation of ticks to the next via the eggs, and since other parasitized animals may harbor the rickettsia, the disease is no doubt here to stay a while.

Though we cannot eradicate ticks, there are some precautions one might take to avoid some of the unpleasantries associated with them. Dogs that frequent heavily tick-infested areas, especially in the peak months of May and June, might be "dipped" or given internal protection against infestation. Such extreme control measures, though, are safe only when undertaken by a veterinarian.

For small infestations, for example in later summer, the parasites may be removed by hand. To facilitate removal and to avoid infection, first soak the tick and surrounding skin with rubbing alcohol. This liquid, disagreeable to the tick, serves to hasten his departure from feeding, and allows one to remove the tick, intact, by gently pulling its body.

Since fully bloated females could lay their eggs if allowed to live, and males and unbloated females will probably seek out another meal, removed ticks should immediately be killed. Removing the head is all but impossible, but fire may be used. Another safe and sure method is to drop the ticks into a jar of rubbing alcohol. This is obviously quite effective. Be sure for your own sake, however, not to handle ticks if you have any abrasions or cuts on your hands, and to clean up thoroughly after removing them.

Though ticks cannot be eradicated, these simple procedures, along with careful attention to kennel cleanliness, may certainly help curb annoying local populations.

Ouch! To ease removal and avoid infection, first soak the tick and surrounding skin with rubbing alcohol.

By PETE ELKINS
Lexington

SPECKLED TREASURE OF THE PIANKATANK

FRESHWATER rivers have their own special magic as they flow their ceaseless way to the sea. The magic is incomparable in its own way, but add a touch of salt and the river turns to a mysterious place, filled with finny inhabitants so strong and heavy that the freshwater fisherman may find his hands trembling with a new excitement. At least that's what happened to me on my first visit to the Piankatank River on Chesapeake Bay.

My host was Wick Vellines, for a day of speckled trout fishing and dove shooting. Freshwater fishing is a compulsion with me. Smallmouths and fast water are my wine and song. Yet the ocean and its tidal rivers always fascinated me. I'd come to enjoy the day's activities and fathom the fascination of the sea.

Late morning found us outboarding through the mouth of a winding, grass-lined creek toward the open water of the Piankatank. Gulls were everywhere, swooping whites and grays above the blue water. The river was flat-calm under the fiberglass hull of the runabout. Around the mouth of the creek, the Piankatank was shallow, filled with green shadows sliding over the white bottom. Large fishing stakes formed a stark, irregular fence receding toward the Bay.

Wick cut the motor. We drifted to a stop. There was surface activity in the shallows and clumsy fingers in the boat as I fumbled a clinch knot to the eye of a ½ oz. red and white bucktail. I pulled the knot tight in a slow, steady tug. A careless knot in four pound monofilament leaves you with an actual strength of two pounds or less. My rod was light, matched to a tiny open-face reel for the ultimate in light tackle pleasure. Had I known more about the rockfish, or striped bass, that schooled in the Piankatank, my tackle might have been heavier. A big rockfish would teach me the error of my light-tackle ways before the day was over.

Our first few casts went unscathed. I noticed that Wick, to whom the salt was nothing new, retrieved his lure rapidly. Accustomed to a more sedate freshwater pace, I had to force myself to rev up the reel until the bucktail darted in life-like darts above the white bottom. Then came the unmistakable instant when the lure stops dead as something electric and alive happens to your rod. What was only a fiberglass a moment before, becomes animated with the strong pulse of a fish.

The school-sized striper fought a spirited battle before allowing himself to be lifted into the boat. After freshwater fish, there was nothing subtle about the striper's appearance. It was shining silver with tints of green surf on its dorsal surface and night-dark stripes along its flanks. I dropped it back into the water. Only a flash marked its disappearance.

Apparently, a school of the small rocks were on the flat. When we took a few more, they either stopped feeding or departed the shallow flat. The stripers were alluring, but we'd come for another fish—the spotted weakfish, or "speckled trout." I'd heard tales from Wick and others of the fine "trout" taken from the Piankatank in both spring and fall.

As the outboard roared to life, and Wick pointed the bow toward his secret "trout hole," I thought of the things that I had read about the spotted seatrout. If you're like me, the physical aspect of fishing is but a part of the enjoyment. Much of the lasting satisfaction comes from knowledge gained about the particular species you're angling for.

I knew that the trout liked to feed over shallow, grassy flats at high tide, returning to deeper water with

Author hefts a sleek speckled trout that hit a red and white bucktail. Ultra-light spinning tackle brings out the best in the scrappy trout.

the receding tide. The speckled trout's closest cousin in Virginia waters is the weakfish, or "gray trout." Although both fish are superficially reminiscent of freshwater trout in the general body outline, the distinct dark round spots of the speckled trout distinguish it from the weakfish. However, both species have fragile mouth membranes; hence, the name "weakfish." This fragile mouth means that the species should be played with a light drag to prevent the hook's tearing a dangerous hole in the tissue. Light tackle is thus an ideal choice for the scrappy fish.

We reached Wick's secret spot near a trio of fishing stakes protruding bleached and gull-topped above the surface. Wick was using a lead jig with a short plastic tail molded in the rough form of a shrimp. These lures are a hot item for speckled trout. The lures are manufactured by several firms under such names as "tout," "salty-dog," "specks-a-go-go," etc. I stuck with the bucktail since it was a pleasure to cast, and the numerous small stripers liked it. The plastic jig took trout, but few stripers.

Finally it came! After becoming attuned to the unique strike of smaller trout, there was no doubt that this one was different. I had made a long cast alongside one of the fishing stakes. The lure dropped to the bottom. I tightened the line and jerked the bucktail off the sand. The strike was hard and heavy. For a moment, it felt as though the barb had driven into the base of the fishing stake. The illusion persisted only for an instant. Then the stake or whatever it was, switched ends and bored away in a drag-chattering run.

With the suddenly too light rod and four-pound line, I could only hang on and ask the fishing gods to keep the big trout from half-hitching the gossamer line around the maze of stakes. I don't know how long it took, five minutes or five hours. It was all the same with the rod bending dangerously and the drag granting line in a commendable and respectful manner. Eventually, I saw the fish as he rolled purple and yellow beside the boat. One last sprint toward a nearby stake which the rod stopped short, then the trout had had enough.

After a nerve-shattering balancing act on the rim of the undersized net, the big trout thrashed futilely on the deck of the boat. The beauty of the fish was marvelous. The broad back was grayish-blue with a purple sheen, blending harmoniously into silver flanks and belly. Dark spots enhanced the back, caudal and dorsal fins. Each fin's yellow tint completed the briny masterpiece.

The trout hung heavy on the pocket scales, over four pounds of citation-worthy spotted seatrout. As I looked one more time at the glistening fish, I wondered who had really been hooked. The Virginia record for spotted seatrout was set in 1957 on Linkhorn Bay by an 8 pound 11 ounce beauty. However, trout go as high as 12 pounds. The world's record, taken from Florida waters, tipped the scales at 15 pounds 3 ounces.

All too soon, the morning ended. The afternoon's dove shoot was outstanding, but my thoughts continued to be of the water and the trout. After the trophy trout had come aboard, something big had broken my line. The mysterious something had smashed the bucktail and never stopped. My drag hesitated just for an instant, perhaps a grain of sand had lodged against the spool, and the line snapped. But that was a fitting end to a new style of fishing.

Piankatank action kicks off in May and reaches a peak in October. This artificial lure fishing of the finest type, with bucktails, plastic jigs, and mirrorlures all producing fish. Red and white is a top color combination for any lure in this group. The Piankatank and its speckled trout will never replace bronze-backs and rocky water, but I intend to pay more visits to the salty river. I'd like to meet whatever it was that made off with the bucktail on the morning of the big trout. I have a spool of eight-pound line waiting for a more formal introduction!

A landing net is an essential item for handling tender-mouthed spotted sea trout.

In Nature's Garden

YELLOW FRINGED ORCHID

By ELIZABETH MURRAY
Charlottesville

Illustrated by Lucile Walton

THE orchids have sometimes been called the royal family of plants. For flashy display, fantastic form and gorgeous color, no other family can rival them. William Hamilton Gibson, from whose sketches and notes one of the first books on our native orchids was compiled at the turn of the century, extended the royal metaphor further. He likened the crests and embellishments of orchids to the heraldry of noblemen, and compared the orchids' elaborate methods for attracting insects to ceremonial dinners in rich castles. He suggested that the ability of many orchids to live on air was comparable to the aristocracy's supposed ignorance of the plumbing and other domestic details behind their existence. He tried to make a case for the orchids' colors, purples, yellows, magentas and golds but never blues, being an essentially royal property, but I think perhaps the analogy is wearing a little thin by this time.

The orchid flower has a very peculiar and characteristic form. Like their near relations, the lilies and the irises, the parts are arranged in threes, but there is a very marked bilateral symmetry. Sepals and petals are all petaloid; that is, they all look like petals. Two of the three sepals are alike while the third is enlarged to make a *hood* which arches over the flower. Of the three petals, two are alike (and may be incorporated into the hood), but the third is much enlarged and considerably modified to form the *lip*. This ought to be the upper petal, but during development the ovary of the orchid twists through 180° so that the lip in fact hangs downward. The reproductive organs of the orchid flower are also highly specialized. Instead of separate pistil and stamens, these are united into a single structure called the *column*. This column may also be curiously shaped, petaloid, brightly colored and sometimes elongated into a large overhanging beak called the *rostellum*.

The lip and the column distinguish the orchid flower from all others and unite in one family thousands of flowers that differ in almost every other respect. The incredible adornments of these parts have been developed to attract insects to the flowers, for orchids are almost entirely dependent on insects for pollination. Many species have elaborate mechanisms which only attract one kind of insect, and therefore the orchid must rely on selfing if it is to survive in a locality where that insect is absent.

By orchid standards, our native North American orchids are not particularly flamboyant. However, the yellow fringed or orange plume orchid, illustrated here, is one of the larger and more showy. It belongs to the genus *Habenaria* which is characterized by a long backward extension of the lip into a tubular hollow structure called a *spur*. The lip itself is often elongated and strap-shaped. It is the form of these two parts that gives the genus its name, which comes from the Greek word *habena*, meaning a thong or rein. This group of orchids is known colloquially either as the fringed orchids or the rein orchids.

In *Habenaria ciliaris*, the yellow fringed orchid, the flowers are arranged up the single stem in *spikes* which may be as much as 6″ long. Each flower is borne on a long slender flower stalk up to an inch in length. The spur measures about an inch, and the lip, heavily fringed all around the edge, about half an inch. The third sepal forms a hood, almost occluding the two lateral petals. The whole plant may be as much as three feet tall, with long, narrow, pointed leaves up to a foot long. These are mainly concentrated at the base of the stem, the few that occur up the stem dwindling rapidly in size.

As with most orchids, the pollen grains are clumped together into two cohesive bundles called *pollinia*. In the yellow fringed orchid these are attached by stalks

to two sticky discs at the entrance to the column. An insect visitor, alighting, will make his way up the fringed lip to the entrance of the column; and as he reaches down inside to get to the nectar, the two discs will stick to the side of his head so that when he backs out he will draw the pollinia with him. If you touch a flower gently, the discs will adhere to you, and when you withdraw your hand you will see the two little stalks and pollinia protruding from the end of your finger like small antennae. It is a bit unfair to the orchid, but it is amusing to see it once.

The yellow fringed orchid can be found in a great variety of habitats. It grows in bogs, swamps, meadows, thickets and pine-barrens, usually places where the soil is slightly acid. In some areas of New England and New York State it is found in great abundance. Farther south it is rarer but still occurs all the way down to Florida and west to Texas. We have a number of them growing around our field station at Mountain Lake. Unfortunately, they are considered to be quite tasty by the large population of deer there, which puts me in a conservationist's quandary. I love the deer, but I do enjoy the orchids too!

No orchid is easy to transplant. It is very hard to get all the soil associations just right, and they are extremely susceptible to attacks from garden pests after they have been moved. In view of this and the fact that the numbers of many of our prettiest species are diminishing, it is perhaps not very sensible to try. Nor do I advocate any large scale eating of the roots. Many orchids have bulbous or thick, tuberlike roots which are quite nutritious, but I think most people would agree that only under pressure of extreme hunger would a meal of yellow fringed orchids be justified. Leave the roots alone, so that by about the beginning of July in this state, you can enjoy their glorious flowers, and go on enjoying them through August, and in some areas, on into September.

STATE PARKS INITIATE COMPUTER RESERVATION SYSTEM

THE Virginia Division of State Parks has completed negotiations with Ticketron, Incorporated, for an electronic computerized reservation system for all State Park campsites and cabins.

The system, operating for the first time in a state park on the East Coast, will enable any person in the United States or Canada to go to a Ticketron terminal and purchase a reserved ticket 90 days in advance of his stay in a Virginia State Park.

Ticketron operates a network of terminals located in major department stores and civic centers throughout the state, and in the Division of Parks headquarters in Richmond, as well as in similar locations in other states. These terminals are connected to computer centers in New York, Chicago, or Los Angeles.

The system has begun accepting reservations for campsites this year, and Park officials hope to have cabins initiated into the computer by January, 1973.

Reservations for campsites during the week of August 28 and anytime thereafter may be made at any one of numerous Ticketron terminals or at the Division of State Parks headquarters as early as 90 days in advance, and as late as Monday for the upcoming weekend.

In addition to securing a reservation at a terminal, a camper may also, by mail, obtain a confirmed campsite for any State Park. The inquiry must be accompanied by a proper application and a check or money order to include the initial reservation service fee, the camping fee, and sales tax.

The camping fee in all State Parks is $3.00 plus four percent sales tax for each night, and the reservation fee is $1.50 for each separate reservation. Application forms may be obtained at any terminal or through the State Parks headquarters and mailed to the Virginia State Parks Reservation System, Box 3181, Norfolk, Virginia 23510. WRITE-INS WILL NOT BE ACCEPTED AT THE DIVISION OF PARKS HEADQUARTERS IN RICHMOND.

At any Ticketron terminal, a camper will complete a registration form that will include his park destination, the day and month that he desires to begin camping, his camping period (minimum 1 day, maximum 14 days), and the size of his equipment.

For example, a camper goes to a terminal and fills out a registration form that includes a 25-foot mobile home and a request for a site at Seashore State Park. The Ticketron operator will then activate an electronic teletype machine, which, in a matter of seconds, will ascertain if the space is available and, if not, will indicate the next site larger than requested until an unoccupied campsite may be obtained. If all campsites at Seashore for that particular equipment have been filled, then upon request, the operator will scan another State Park.

Ticketron terminals are scheduled to operate in the following Virginia cities or areas: Bristol, Charlottesville, Danville-Martinsville metropolitan area, Fredericksburg, Hampton Roads metropolitan area, Lynchburg, Newport News, Norfolk, Richmond, Roanoke, Virginia Beach, and Winchester.

Let's Cook Rattlesnake

By MARJORIE LATHAM MASSELIN
Richmond

"COMPLIMENTS of the Mess Sargeant," I was told and a plate was put into my hand.

"What is it?" I am always suspicious when anyone *gives* me anything.

"Taste it!" Still I hesitated, trying to make the thing look like something familiar. "Go on, don't be so picky!" So I ate a bite.

"Well, it's not bad," I admitted, but I still wanted to know what it was.

"What does it taste like?"

"Chicken is the closest thing I can think of, but I don't believe it is."

"Do you like it?"

"Well, I'm not absolutely wild about it, but then I'm not starving to death either." I handed the plate back. I had attended a luncheon and eaten far more than I like to eat in the middle of the day. Besides, I had figured out what it was. If you have all the usual prejudices against snake meat, the first sample is *bound* to be a shock.

True, the rattlesnake does not abound in Virginia the way it does in Alabama where I was introduced to it. At Fort Rucker, when we were there, an "advance snake party" had to clean them out of the stands before a class could be put in! Of course, after the stands began to be used regularly the snakes disappeared—but not before quite a few of them had disappeared into the mess halls.

There was one captain down there who was an old outdoorsman from 'way back, and he never did see any point in wasting good meat. Besides, he had eaten rattlesnake meat and knew it was good. So he brought one back to the mess sergeant one day and first thing he knew it got to be a habit. Everybody—well not everybody, but most of those who got up enough nerve to try it in the first place—liked it. It was always served "in addition to" and never in place of the regular fare. *But the point is that it was popular.*

Westerners seldom think of snake meat as being edible, but to the Oriental it has always been a gourmet treat. There are restaurants that specialize in it, and at least one that I have read about allows the diner to select his meal in the live state and have it cooked to order! Thanks, no. But I must admit that already dead, cooked like a cutlet and served without comment, it really was good . . . *after* I had time to get used to the idea.

I am not advocating that we start organizing snake hunts or that there should be a rattlesnake along with the chicken-in-every-pot. However, if you are determined to kill one, or forced to kill one, don't throw it away. Take it back to camp and cook it. You *can* take it home and cook it, but *you* cook it. The average housewife may not appreciate your gesture.

When I used the words "determined" and "forced," I meant them. A rattlesnake is not the most aggressive of God's creatures, and unless you scare one or get him cornered, he will be very happy to leave your company. He would rather switch than fight. This much I am sure of—as much as I share a snake's lack of interest in getting acquainted—if I were hungry enough I could kill one, and I could skin him and cook him. If you can get that far, I promise you will enjoy eating the meal.

The cutlet that was served to me was from an outsize Alabama rattler that I swear was at least six inches across. I did not see it in the whole state, but my husband did and he is not prone to exaggerate. Six inches, he agrees, is on the conservative side. It took a jeep to kill it, and it was the largest one taken in the three years we were there.

The smaller ones can be handled—from the cooking standpoint—like an eel. Actually it is easier to handle than eel and much easier to handle than a dead fish. If you have ever tried to fillet a flounder on your own, you are likely to decide in favor of the snake.

Cut it in cross sections about an inch or an inch and a half thick, simmer in white wine and serve with a nice velouté sauce.

A big fellow, like the one I sampled, can be cut into thinner cutlets, boned raw, then breaded with egg and crumbs and fried. The result will be similar to a "butterfly" cutlet for general appearance.

People will tell you that rattlesnake looks and tastes like chicken, and I grant you that is the closest approximation *I* can think of for a comparison. People will also tell you that butter tastes like margarine or vice versa. I have nothing against margarine, but I have never been able to see any similarity between it and butter.

The fact is, rattlesnake tastes like rattlesnake. Like all the good things in life, it has a character of its own. Once you have tasted it, you are not really interested in trying to make it taste like anything else. You like it for what it is.

Honest!

Know Your BIOLOGISTS

Text and Photos by F. N. SATTERLEE
Information Officer

CHARLES H. SHAFFER
Game Management Field Coordinator

Charles (Kit) Shaffer was born and raised in Somerset County, Pennsylvania, attended Franklin-Marshall College in Lancaster, and graduated with a Phi Beta Kappa key and a B.A. degree in Industrial Management.

During World War II he met a Navy officer whose peacetime profession was that of wildlife management professor at V.P.I. As a result Kit became a graduate student in wildlife management at V.P.I. and received his M.S. degree in 1947. His thesis work involved research on the raccoon. He was hired by the Game Commission as a district biologist, promoted to supervising biologist in 1955, and to his present position in 1964.

He has two hobbies, Indian artifacts and the wild turkey. His collection of artifacts may not have brought him national recognition, but his work with the wild turkey has made him one of the nation's leading authorities on *Meleagris gallopavo*. He is a contributing author of the book, *The Wild Turkey and Its Management*, recently published by The Wildlife Society.

Kit is a charter member of the Virginia Wildlife Federation, an officer in the Lynchburg Chapter of the Izaak Walton League, and past chairman of the Virginia Resource-Use Education Council. He and his wife, the former Janet Lebo, have two daughters and one son, and make their home in Lynchburg.

CHARLES P. GILCHRIST, JR.
Supervising Game Biologist

Charles P. Gilchrist's father was a career member of the U.S. Marine Corps and consequently, as a youngster, "Charlie" lived in a variety of locations most of which were on the eastern seaboard. He was born in Richmond, Virginia, spent most of his youth in the county by the same name and later attended The Citadel in Charleston, South Carolina. Following a World War II four-year hitch in the Marine Corps he returned to The Citadel where he was graduated with a B.S. in Political Science.

It was during this second college session that he really became interested in fish and wildlife. Mr. Gilchrist entered V.P.I. in Blacksburg and graduated with a Master's Degree in Wildlife Management. He joined the Game Commission as a District Biologist in 1950 and is currently Biologist Supervisor for the Southeast Virginia region.

Charlie is the Commission's representative on the Atlantic Waterfowl Council, which has members from the eastern seaboard states, Canadian provinces on the east coast, and federal and provincial governments of both countries. He and his wife, the former Frances Jenkins of Charleston, have two sons and make their home in Tappahannock.

Edited by HARRY GILLAM

Two New Outdoor Guides Available

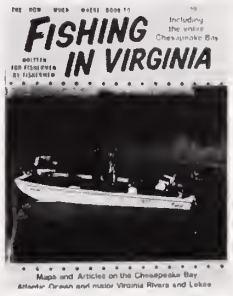
New 1972 editions of the Alexandria Drafting Company's *Freshwater Fishing and Hunting in Virginia* and *Saltwater Sportfishing and Boating in Virginia* are now off the press and available at most retail sporting goods and marine outlets. With these two fine guides a sportsman can plan most any type of outing in the Old Dominion without moving from his armchair. They thoroughly cover when, where and how to catch both marine and freshwater fish and where to find game, and include maps and charts detailing exactly how to get to the best spots, where to stay and where to find necessary services such as marinas, ramps, campgrounds, etc.

FRESHWATER FISHING AND HUNTING IN VIRGINIA contains 56 pages of four-color maps showing rivers, lakes, hunting areas, parks, boat ramps, trails, campgrounds, National and State forests, and many other features of interest to the recreationist. The four center pages contain full color illustrations of Virginia's freshwater fishes. The text includes details on license requirements, types of fish and game and where to find them, methods, and detailed maps of specific areas. Listing of motels and hotels, campgrounds and other recreational facilities aid in trip planning.

SALTWATER SPORTFISHING AND BOATING IN VIRGINIA is probably most valuable for its 66 pages of four-color navigation charts which cover the Virginia coast, the Chesapeake Bay and all tidal rivers. These charts show water depths, marinas and docks, campgrounds and the best fishing spots for each species of salt and brackish water fish. The text tells how to catch these fishes, where to get them, and when. Fishing reports give a week by week rundown on the 1971 season and a fishing calendar helps pinpoint the time to expect each species to bite. Additional information is included on marina facilities, tide tables and navigational information.

Both of these guides are available from retail outlets throughout the state or postpaid from the publisher at 417 E. Clifford Avenue, Alexandria, Va. for $5.41. North Carolina outdoor buffs will find similar guides to recreation in that state available from this publisher as is a guide to fishing in Maryland's end of the bay.

Fishing in Virginia Guide



The 1972 edition of FISHING IN VIRGINIA is now off the press and available at news stands and sporting goods stores around the state. It contains complete two-color maps of the Chesapeake Bay plus some freshwater rivers and lakes. Launching ramps and good fishing spots are pinpointed. Listings include marinas, boat landings and tide tables. Ten articles by leading Virginia outdoor writers give anglers the low-down on catching everything from saltwater species to trout and smallmouths.

Informational pages summarize license requirements, fishing regulations, facilities at state managed lakes and other items of interest to the anglers. The 112 page book retails for $2.99. It is published by Virginia Sports Publications, P. O. Box 305, Alexandria, Va.

New Records

Paul Creggar of Hopewell caught this 14 pound monster from Gaston Lake in late April to break the largemouth record for the fourth time in the past 12 months, all of the big bass coming from Gaston.

This 33 pound 4 ounce striper from the waters of Gaston Lake below Kerr Dam raised the state striper record by about a pound. Happy angler Carl Higginbotham landed the big fish in late May.

Edited by ANN PILCHER

Forestry Scholarship Winners

Recipients of forestry scholarships provided by Virginia Forests, Inc., for the 1972-73 school year include Linwood Craig Carr of Holland, Virginia, winner of the $1500 Victor W. Stewart scholarship ($500 for each of Carr's last three years at VPI & SU), and Howard Clay Canada III of Midlothian, Gerald Ernest Craig of Bedford, and William Cowan Gilmore of Charlottesville, winners of the three $500 scholarships awarded to freshmen entering VPI in the Division of Forestry and Wildlife. Carr was a 1971 $500 scholarship recipient.

Shooters' Calendar

The National Shooting Sports Foundation's "1972 Shooters' Calendar," listing more than 30 major rifle, handgun, shotgun and muzzle-loader national and international shooting competitions, highlighted by Summer Olympic Games, is available from the Foundation, located at 1075 Post Road, Riverside, Connecticut 06878. Archery events are shown for the first time.

Tree Book Enlarged

GROWING YOUR TREES, published by The American Forestry Association, 1319 18th Street, N. W., Washington, D. C. 20036, and now in its fifth edition, has been enlarged by two new chapters titled "Dwarf Trees and Slow Growers" and "How to Cope With Insects and Diseases." This edition also contains American Forestry Association's "seven BIG points to remember about planting trees," and AFA's answers to "seven" commonest questions about growing trees." Co-authored by Wilbur H. Youngman and Charles E. Randall, the book still sells for $2 per copy (10% discount to AFA members).

Cleaner Environment Competition

Entries in the 1972 Keep America Beautiful awards program must be received in KAB's New York office by August 15, 1972. Any organization conducting an ongoing litter-prevention program as an integral part of an environmental improvement effort is eligible. Awards are offered for outstanding achievement in the following program categories: State; County; Community—any political subdivision smaller than a county; Regional—two or more political subdivisions, of any size, working together; Government agency—any level; Business; Youth—(a) school grades 1-6, (b) school grades 7-12, (c) chapter of national organization, (d) autonomous youth organization; Other organization. Write KAB, 99 Park Avenue, New York, New York 10016, for entry criteria. Winners will be notified by October 16; awards presented at a luncheon at The Plaza Hotel in New York City on November 16.

Collegians Qualify as Instructors

National Rifle Association Training Counselor John W. Courtney, Jr., of West Point, conducted a NRA Rifle Instructor School at the ROTC Department of the College of William and Mary, Williamsburg, during April and May. Graduated as *certified rifle instructors* were Deborah D. Jones of Hampton Institute; Carolyn R. Martin of Rappahannock Community College, South Campus; Franklyn C. Morgan and Lawrence T. Leightley of the host rifle team. In addition, two William and Mary ROTC staff members became certified instructors: Captain Bruce L. Sisco, Jr., and Sgt. Major Winfred B. Niles. Four students were graduated as *assistant rifle instructors* (under 21 years of age): Samuel Jefferson and Lewis T. McMillon, Hampton Institute; Robert B. Honec, III, and John M. Kirby, College of William and Mary.

Holston Haul

Patrick McCall, 10, of Meadowview, son of Washington County's deputy sheriff Lt. John A. McCall, just can't believe he caught "the whole thing." His 6 lb. carp measured 26 inches and was taken on worm-baited 8 lb. test line April 16 from the Holston River's Middle Fork.

Safety: Badge Requirement

As a part of the requirements for the Rifle and Shotgun Merit Badge, members of three Boy Scout troops in Arlington have completed the Virginia Hunter Safety Course conducted by James K. Hall, hunter safety instructor and merit badge counselor: Troop 648 sponsored by Arlington Forest Methodist Church, Troop 116 sponsored by Trinity Presbyterian Church, and Troop 638 sponsored by Little Falls Presbyterian Church.

Honorary Rifle Team Selected

Selected in February, the Virginia All State Collegiate Rifle Team is comprised of three University of Virginia rifle team members: Richard Blake of Falls Church, Paul E. Benesche and Douglas E. Jackson of Charlottesville; and Hampton Institute rifle team members Deborah Diane Jones of Elmhurst, New York, and Selton James Sampson of Charlottesville. According to J. W. Courtney, Jr., Vice President of College and Junior Activities of the Virginia State Rifle and Revolver Association, Inc., the team is honorary (members chosen because of past accomplishments) and does not meet to shoot together. Each of the five college shooters received a silver medal from the Association.

Edited by JIM KERRICK

Charter A Second Honeymoon

It's been ten years, three kids and two houses since that fateful day when you said, "I do."

It is all a fond memory now: the gala reception at the country club and the two romantic weeks in Bermuda. To mark a decade of love and kisses, dirty diapers, two o'clock feedings and women's club meetings, you are planning a second honeymoon.

It's been rough trying to decide. A trip to the Caribbean sounds nice, but you're sick of flying around. A Florida vacation? Well, you've been there before.

What about chartering a cruise? Just the two of you. Or maybe ask your best friends along. That is an ideal way to celebrate a second honeymoon.

Chartering cruises is a popular way to spend a vacation and for people with romance in their eyes, there isn't a more beautiful sight than mother nature herself.

It's a new way to travel for people who have never done much boating but always wanted to. It is less hectic than the tourist traps. And there's the warm feeling of togetherness which is what you're looking for, right?

When you charter a boat—and there are two ways of doing it—you just don't sit back and relax all the time. You chip in with different chores. You can also fish, swim, dive, sunbathe, visit different ports of call or just take it easy as you cruise along in a bright, clean and wonderful world. The world, unfortunately, most people never get to see.

If you are a newcomer to boating, not really knowing which is the bow or the stern, but never wanting to admit it, a crewed charter is just what you're looking for. Its name explains just what it is: a cruise aboard a rented boat with a professional captain and crew on board to run it.

Although there is a crew and captain, you will help some and possibly take over several activities if you become good enough.

The other type of charter is the bareboat, where you rent the boat and run it on your own. You sail it, maintain it, supply it, captain it and are responsible for what happens onboard.

A rookie boatman would not sign to bareboat. No one would be so foolish and a broker wouldn't let you, anyway. Well-known brokers are reliable and their aim is to see to it you have an enjoyable cruise.

Your satisfaction is money in the bank to them. But, remember, it goes the same for you. When you sign for a charter, all terms should be specified clearly in the contract. If something is not clear to you, ask about it.

Most standard yacht charter party agreements cover terms such as crew, delivery, insurance, accidents, restricted use, defaults, disputes, brokerage fees, the authority you have over the crew, unforeseen complications, running expense and re-delivery.

It's better to go overboard in your agreement than not cover a possibility that may come up later.

The broker will be of service to you in helping pick out what equipment you will need. He will make certain you don't overload a boat with unnecessary items. Space is at a premium.

Remember this is your honeymoon. Your first one was between just the two of you. This second one is going to be with friends, possibly. Don't pick someone whom you think would become a drudge on the trip. One unsatisfied person can turn your dream into a nautical nightmare.

Be realistic about your trip. Plan an itinerary of places you would like to see but leave considerable leeway for changes in the schedule. There's no rush. The world will be here tomorrow so you don't have to see everything this time around. One of your reasons for going on this trip is to relax. You may find a secluded cove where you may like to stay an extra day. Do it! It's just what makes the trip more worthwhile.

This vacation is to bring back old fond memories while adding new joys to your present life. After three kids, two houses and ten years, you deserve to be alone again just like it was those first few weeks.

Use Guides to Plan Vacation

Don't wait until the last minute to obtain information when planning your summer cruise or your vacation.

After you have decided where you are going, write to each state requesting information on launching facilities, list of marinas and a copy of their boating regulations. There are variances in boat laws throughout the United States. The U. S. Coast and Geodetic Survey has charts on all coastal and larger impoundments.

When you have assembled all the material you need, call the family together to discuss the merits of each area. After a decision has been made, plan your trip so that everyone will enjoy it.

Make up a check list to ensure that you have all the equipment required in your boat, and don't leave anything behind at home that you need or that is required.

Notice

Remember that effective October 1, 1972, all boats propelled by machinery, to include electric motors, must be registered with the Boat Section, Virginia Commission of Game and Inland Fisheries, and the registration number must be displayed on the forward part of the boat.

Bird of the Month:

Black Skimmer

By JOHN W. TAYLOR
Edgewater, Maryland

STRIKING, almost grotesque in appearance, and with a highly specialized life-style, the skimmer seems a wanderer from another planet. Everything about the bird is peculiar: its shape, manner of flight, method of feeding and weird, bark-like call. Its tendency to become more active towards dusk, and even into the night, adds to the eerie mood surrounding it.

First off, consider its bill. The whole thing seems too large, too long, as if the bird were afflicted by disease or malformation. The lower mandible is longer still, by more than an inch. Blood-red, with a black tip, this monstrous appendage is compressed laterally, not spread towards the tip as with most species.

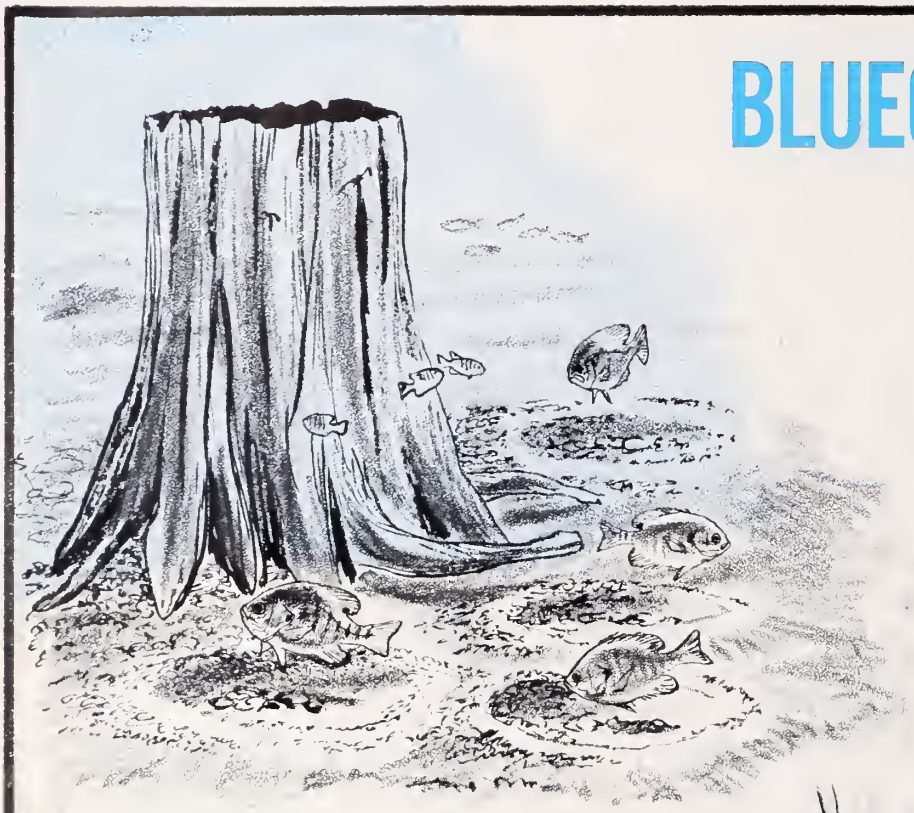
In flight, the short, jerky stroke of the wings results in a strange bounding motion that is almost bat-like. The beat, though slow and deliberate, propels the bird at a surprising speed.

There is considerable mystery regarding the "plowing" habit of skimmers, the manner in which they cut the water with the elongated lower mandible. Most observers assume that the bird is feeding, scooping particles of sea-life into the bill or catching fish. Some ornithologists hold that it is not a food ingesting process at all, but a manner of luring fish, both by the movement on the surface, and by the bright color of the bill. This theory is buttressed by the fact that skimmers habitually "replow" their own furrows, as if checking a baited trail. Too, there is no evidence, based upon stomach examinations, that the bird feeds on minute organisms that could be scooped from the water. The argument is made more convincing when the structure of the bill is examined; it does not have the sifting apparatus like that found in spoonbills and some waterfowl.

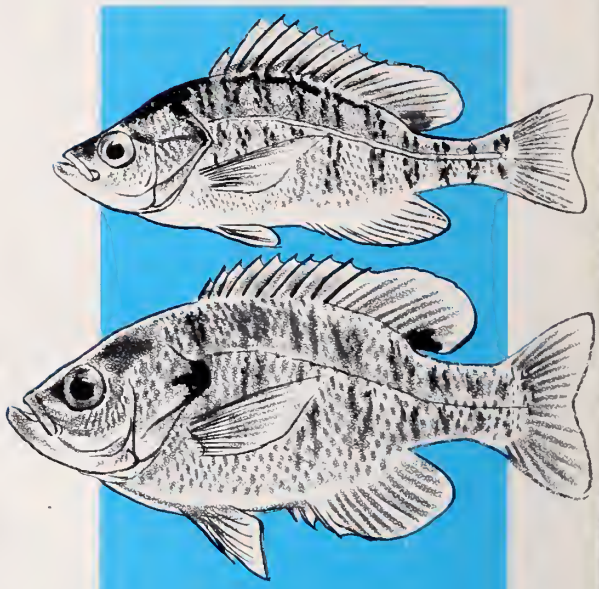
Again, it may be, as other scientists have conjectured, that the habit is of genetic origin, an ingrained trait left over from a much earlier time. They point out that the birds skim when they become nervous or frightened, when they certainly could not be looking for food; and that they have a predilection for barely clearing any surface they fly over, whether it be beach, marsh grass or water.

The black skimmer is present on both continents of the New World, finding its center of abundance in South and Central America, where it is chiefly a resident of the larger inland rivers. North American birds are strictly littoral, breeding on sandy beaches as far north as Long Island. They have not suffered the population decline experienced by most beach-nesters, and breed in good number on the barrier islands along Virginia's Eastern Shore. By September, most of them have moved south, to winter in Florida and the Caribbean.

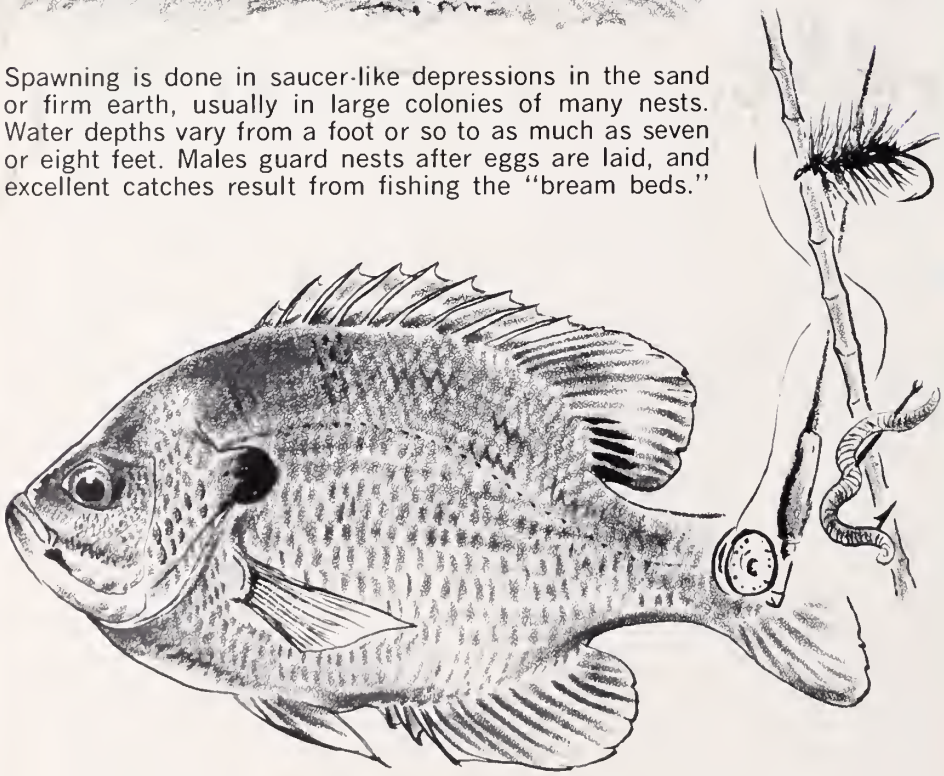
BLUEGILL



Spawning is done in saucer-like depressions in the sand or firm earth, usually in large colonies of many nests. Water depths vary from a foot or so to as much as seven or eight feet. Males guard nests after eggs are laid, and excellent catches result from fishing the "bream beds."



Young bluegills usually have proportionately larger eyes than adult fish, are marked with distinct blue or green bands, and have transparent fins. As the fish grows, the body deepens, color may change, and their entire appearance is different.



Few fish furnish more sport than does the bluegill. The fly fisherman and cane pole angler both share the harvest. The bluegill is widely distributed and is found in most of our lakes, ponds and rivers.

BLUEGILL FOODS

Dragonfly nymphs

Midge fly larvae

Top minnows

D RAVER